



## Reclamation Research Unit

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Date: Janaury 25, 2006

To: Sue Sillick

From: Stuart Jennings

Re: Progress Report 10. *Evaluation of Organic Matter Addition and Incorporation on Steep Cut slopes, Phase II: Test Plot Construction and Performance Monitoring*

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The tenth progress report of Phase II of the above referenced project is attached. The narrative describes work occurring between October 1, 2005 and December 31, 2005.

***Quarterly Progress Report #10***  
For the period October 1, 2005 – December 31, 2005

**EVALUATION OF ORGANIC MATTER ADDITION  
AND INCORPORATION ON STEEP CUT SLOPES**

***Phase II: Test Plot Construction and  
Performance Monitoring***

***Prepared For:***

Montana Department of Transportation  
P.O. Box 201001  
Helena, MT 59620-1001

***Prepared By:***

Reclamation Research Unit  
Department of Land Resources and Environmental Sciences  
Montana State University  
Bozeman, MT 59717-2910



January 2006

## **Task Analysis and Discussion**

Monitoring of field sites near Miles City on I-94 and U.S. 12 occurring during the past quarter. Expenditures incurred are attributable to progress report writing, communications, travel to the research sites and collection of vegetation, soil and erosion data. Monitoring consisted of vegetation canopy measurement, soil sampling and erosion estimation using methods developed by BLM for Montana rangeland sites. Plant production data was not collected due to the larger proportion of the vegetation community attributed to annual weeds. Observations from the site suggest that while the sites have completed 2 growing seasons worth of vegetation development, due to drought the plant community is more representative of a first year condition due to the abundance of annual weeds. Production measurement was consequently postponed to summer 2006 to provide a more representative measurement of the long-term vegetation condition.

### **Task I—Site Sampling**

Soil samples were collected from the research plot locations prior to treatment. These same locations were resampled during the past year. Soil samples were collected at Happys Inn during the third quarter while the Miles City plots were resampled during the fourth quarter of 2005. Both sets of samples were dried, disaggregated, homogenized and submitted for laboratory analysis during the past quarter. Results should be available during early 2006.

### **Task K - Year 2 Monitoring--2005**

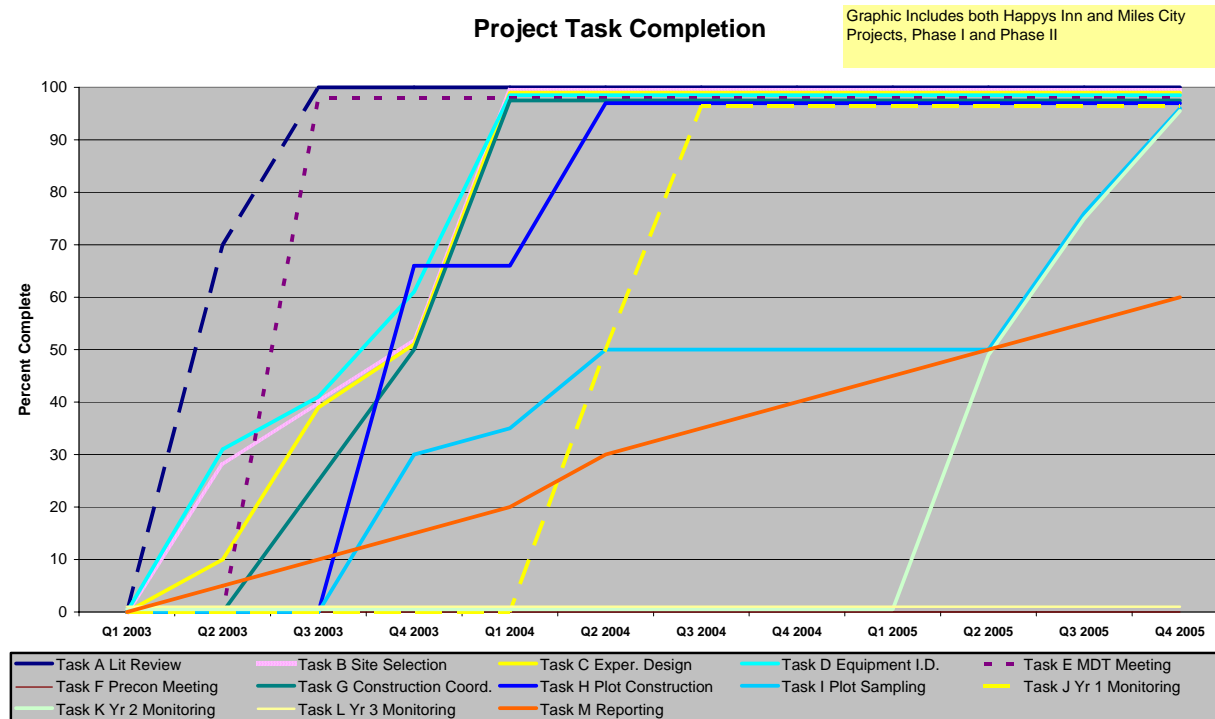
This task is 100% complete. Fall monitoring occurred at Miles City on October 3 and 4, 2005.

### **Task M - Reporting**

This tenth quarterly report satisfies the periodic reporting requirement of the contract. A Final Report will also be completed in late 2006 summarizing the research findings.

**Schedule and Degree of Completion—all research sites**

| <i><b>Task<br/>Description</b></i>                 | <i><b>Budgeted<br/>Total<br/>Phase II</b></i> | <i><b>Proposed<br/>Schedule</b></i>            | <i><b>Actual<br/>Schedule</b></i> | <i><b>Degree of<br/>Completion</b></i> | <i><b>Estimated<br/>Expenditure<br/>during<br/>current<br/>quarter</b></i> |
|--|---|--|-----------------------------------|--|--|
| Task B<br>Site<br>Reconnaissance                   | \$678   | Q3, 2003                                       | Q3 2003, and<br>Q1 2004           | 100%                                   | 0  |
| Task C<br>Experimental<br>Design                   | \$407   | Q4, 2003                                       | Q4 2003, and<br>Q1 2004           | 100%                                   | 0  |
| Task G<br>Construction<br>Schedule<br>Coordination | \$377   | Q3, 2003                                       | Q1, 2004                          | 100%                                   | 0  |
| Task H Plot<br>Construction                        | \$36,087                                      | Q4, 2003                                       | Q4, 2003                          | 100%                                   | 0  |
| Task I Site<br>Sampling                            | \$8761  | Q4, 2003<br>and Q3 2005                        | Q4, 2003<br>Q3,Q4 2005            | 100%                                   | \$400  |
| Task J Year 1<br>Monitoring                        | \$13,083                                      | Spring and<br>Fall, 2004                       | Spring and<br>Fall, 2004          | 100%                                   | 0  |
| Task K Year 2<br>Monitoring                        | \$15,912                                      | Spring and<br>Fall, 2005                       | Spring and<br>Fall, 2005          | 100%                                   | \$4000   |
| Task L Year 3<br>Monitoring                        | \$16,065                                      | Spring and<br>Fall, 2006                       | Spring and<br>Fall, 2006          | 0%                                     | 0  |
| Task M<br>Reporting                                | \$16,380                                      | Quarterly<br>and Final<br>Report, Fall<br>2006 | ongoing                           | 55%                                    | \$1000   |



## Problems and Resolution

No problems were encountered during the current quarter.

## Accomplishments

Completion of the Miles City 2005 monitoring occurred during the past quarter. Soil samples were processed and submitted for laboratory analysis.

## Fiscal Expenditure

Amount Spent by budget category:

| <i>Cost Category</i>      | <i>Spent prior to<br/>current quarter<br/>(\$)</i> | <i>Spent during the<br/>current quarter<br/>(\$)</i> | <i>Total spent<br/>to date<br/>(\$)</i> |
|---------------------------|--|--|---|
| Labor and Benefits        | \$43,002   | \$3307   | \$46,309                                |
| Operational<br>Expenses   | \$6765   | \$847  | \$7612                                  |
| Subcontracted<br>Services | \$16,764   | 0  | \$16,764                                |
| Indirect Charges          | \$11,763   | \$1275   | \$13,038                                |
| <b><i>Total Spent</i></b> | <b><i>\$78,294</i></b>                             | <b><i>\$5429</i></b>                                 | <b><i>\$83,723</i></b>                  |

Total Project Award            \$108,975 (original budget) + \$9031 (modification April 2004)  
   \$118,006 (total award)

Amount Remaining                \$34,284